Sustainable INL News

Meeting the needs of the present without compromising the ability of future generations to meet their needs

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Office Environmental Quality

daho National Laboratory is participating in a Canadian National Research Council two-year study of the quality of indoor office environments. The study uses a mobile, high-tech computerized sensor system to gather data on lighting, sound quality, office temperature, reflectivity of office surfaces, amount of air movement, and other factors that affect the comfort and satisfaction levels of office workers.

"Our two-year Post
Occupancy Evaluation is a
field study of 20 buildings
across the United States
and Canada," said
Benjamin Birt, Ph.D., one
of the lead researchers on
the project. "We are
researching both 'green'
buildings and more
traditional buildings to
study energy use and how it
relates to occupant
satisfaction and work
performance."

Accompanying him were Gunnar Gladics, M.A. and Research Scientist from the University of Idaho, and Chris Ischay, INL Sustainability Program manager.

"This is important to us because our new buildings not only need to be greener environmentally, but they need to be comfortable places to work," Ischay said. "Besides saving energy, they really should be the kind of environments where workers are very satisfied to be."

among just four U.S. sites in the study), but will yield data of use to building industry experts everywhere, Birt said. "Our primary focuses are lighting, acoustics and indoor air quality, as they relate to energy consumption and the comfort of occupants."

For each office where data is gathered, a survey link is

Research Council with the study – and provided the key link to INL as a study participant.

In the end, the output will be used in ways that improve building codes, regulations and requirements, and help improve the design and evaluation of buildings in the future.

Sustainable INL Program

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"It is important that our architecture be sustainable, our indoor environments be pleasing as well as functional, and our people be very satisfied with the space in which they work" - Debby Tate, F&SS

At INL, the researchers took measurements at a variety of office locations in the Center for Advanced Energy Studies (CAES) and Willow Creek Building. While WCB was designed for energy efficiency and occupant comfort, it is classified as a traditional office building for the purposes of this study as it does not meet modern 'green building' standards, Birt noted.

The study is primarily of Canadian buildings (the INL buildings are two sent to the office occupant(s) that helps assess their comfort and satisfaction with the temperature, lighting, acoustics and other factors.

Along with building experts, psychologists and other researchers will study all the data in an effort to better understand how green buildings can be built to achieve the highest occupant satisfaction.

The University of Idaho Integrated Design Lab is assisting the Canadian



